

CHAPTER

One

Introduction

1.1 Purpose and Need

The purpose of this Wilderness Management Plan is to guide the management of resources and visitor use in the wilderness areas of Grand Canyon National Park. The primary need for the plan is to address wilderness and backcountry issues in the context of the Wilderness Act (See Appendix A, Wilderness Act); Grand Canyon's enabling legislation; *National Park Service (NPS) Management Policies* (See Appendix B, *NPS Management Policies*); and the 1995 Grand Canyon National Park General Management Plan (GMP).

1.2 Wilderness Responsibilities

The Wilderness Act defines wilderness as "an area where the earth and its community of life are untrammelled [uncontrolled] by man...retaining its primeval character and influence, without permanent improvements...." Wilderness managers are instructed to "administer [wilderness areas] for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness [emphasis added]."

Wilderness reinforces the purposes of the national parks established by the National Park Service Organic Act (1916) "to provide the enjoyment...in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The Organic Act (as amended) allows for activities, including the protection, management,

and administration of national parks only if "conducted in light of the high public value and integrity" of such areas, "and shall not be exercised in derogation of the values and purposes for which these areas have been established...." (16 USC 1a-1; *NPS Management Policies*, 1:1)

The Wilderness Act also defines wilderness as an area possessing "outstanding opportunities for solitude or a primitive and unconfined type of recreation." The Act not only strengthens the NPS preservation mandate, but provides for and protects opportunities for a wilderness experience.

1.3 Scope of This Wilderness Management Plan

The Wilderness Management Plan addresses issues and provides guidelines for managing those areas defined as proposed wilderness (See map, Figure 1.1). Over 94% (1.1 million acres) of Grand Canyon National Park is proposed for immediate designation. The proposed wilderness is primarily inner canyon and rim areas and does not include the developed areas nor the Cross-Canyon Corridor. The Cross-Canyon Corridor consists of campgrounds, a tourist lodge, and ranger stations along the North Kaibab, South Kaibab, and Bright Angel Trails. The Colorado River is proposed as "potential wilderness," and issues specific to river management will be addressed in the Colorado River Management Plan. Issues which pertain specifically to the Cross-Canyon Corridor and the Colo-

rado River are not within the purview of this Wilderness Management Plan.

This Plan has incorporated some of the management objectives, standards, and strategies of the 1988 Backcountry Management Plan. Within this framework, this Plan provides direction for management of natural and cultural resources within the context of wilderness management policies, with a primary focus on visitor use and impacts to wilderness values and resources. Changes since the 1988 Plan are noted at the end of the applicable chapter.

1.4 Goals of the Wilderness Management Plan

As stated in the 1995 Grand Canyon General Management Plan

The vision statements for the park convey the essence of the park's qualities and desired future conditions... The visions affirm what must be preserved, as well as what types of experiences visitors should be able to expect.

In terms of Wilderness, the GMP further states that

...these areas offer visitors opportunities for solitude and primitive recreation. The management of these areas should preserve wilderness values and character. Non-wilderness undeveloped areas should continue to serve primarily as primitive thresholds to wilderness.

Visitors traveling through the Canyon in the backcountry should have the opportunity for a variety of personal outdoor experiences, ranging from solitary to social. Visitors should be able to continue to experience the backcountry with as little influence from the modern world as possible. The backcountry experience should help visitors relate intimately to the majesty of the Canyon.

Within this context, this Wilderness Management Plan is intended to serve the following goals

1. Provide guidance and describe strategies for meeting legislative and policy mandates on wilderness management while providing recreational opportunities consistent with wilderness, for a broad range of visitor experiences and settings, and preserving and protecting the natural, cultural, and social resources of Grand Canyon National Park.
2. Provide for the continuity of wilderness management throughout changes of park administration and staff.

1.5 Objectives of the Wilderness Management Plan

The management objectives of this Wilderness Management Plan are based on the Park's vision statements articulated in the GMP, and are within

If future generations are to remember us with gratitude rather than contempt, we must leave them more than the miracles of technology. We must leave them a glimpse of the world as it was in the beginning, not just after we got through with it.

President Lyndon B. Johnson on signing the Wilderness Act, 1964

the intent of the enabling legislation and Wilderness Act. The objectives, which are quantifiable and measurable, describe desired conditions to be achieved.

Objective One

Establish and implement a permit system that

- serves the visitor by providing the opportunity to obtain permits for wilderness and nonwilderness areas that yield the type of experience they seek
- serves Park management by providing an effective way to educate the public on low-impact practices, ethics, and safety
- serves Park management by providing data on hiker use levels and distribution in order to make informed decisions regarding the management and protection of backcountry and wilderness resources.

Chapter 5

Backcountry Permit System

Chapter 6

Wilderness Campsite Management

Chapter 12

Monitoring and Research

Objective Two

Establish indicators and standards for desired visitor experiences, and bio-physical and cultural resources; monitor regularly the condition of these indicators; and take management action as necessary to meet these standards.

Chapter 3

Wilderness Management

Planning Framework

Chapter 6

Wilderness Campsite Management

Chapter 12

Monitoring and Research

Chapter 13

Restoration and Rehabilitation of

Recreational Impacts

Chapter 14

Cultural Resource Management

Objective Three

Provide access consistent with wilderness values, including protection of natural and cultural resources. Preserve the character of individual trails, and establish minimal standards for primitive roads.

Chapter 7

Trails Management

Chapter 8

Semi-Primitive Access and Facilities

The chapters and appendices which discuss actions to meet stated objectives are listed after each objective.

Objective Four

Establish a coordinated interpretive/educational program to provide hikers adequate information to plan and execute an enjoyable and safe expedition, whether hiking for a day or for an extended period, and to conduct themselves in a manner which is not damaging to wilderness resources and values.

Chapter 5

Backcountry Permit System

Chapter 9

Safety and Emergency Operations

Chapter 10

Interpretation, Education, and Information

Objective Five

Provide, through partnerships with adjacent land-managing agencies, information on wilderness and nonwilderness recreational opportunities on adjacent lands, including National Forest Service, Bureau of Land Management, State, and Tribal lands.

Chapter 4

Recreational Use of Wilderness

Chapter 5

Backcountry Permit System

Chapter 15

Havasupai Traditional Use Lands

Appendix E

Recreational Opportunities and Permit Information for Adjacent Lands

Objective Six

Provide a reasonable level of public safety, consistent with wilderness areas in accordance with *NPS Management Policies* and Park guidelines.

Chapter 4

Recreational Use of Wilderness

Chapter 9

Safety and Emergency Operations

Chapter 10

Interpretation, Education and Information

Objective Seven

Encourage research which adds to an understanding of the Park and contributes to the body of knowledge required for effective management and protection of wilderness resources and values.

Chapter 11

Ecosystem Management

Chapter 12

Monitoring and Research

Objective Eight

Develop, through partnerships with adjacent land-management agencies, conservation organizations, and institutes of higher learning, an interagency ecosystem-management strategy. The strategy will emphasize restoration and maintenance of natural processes and viable populations of all native species in natural patterns of abundance and distribution.

Chapter 11 Ecosystem Management

1.6 Wilderness Management Plan Review and Update

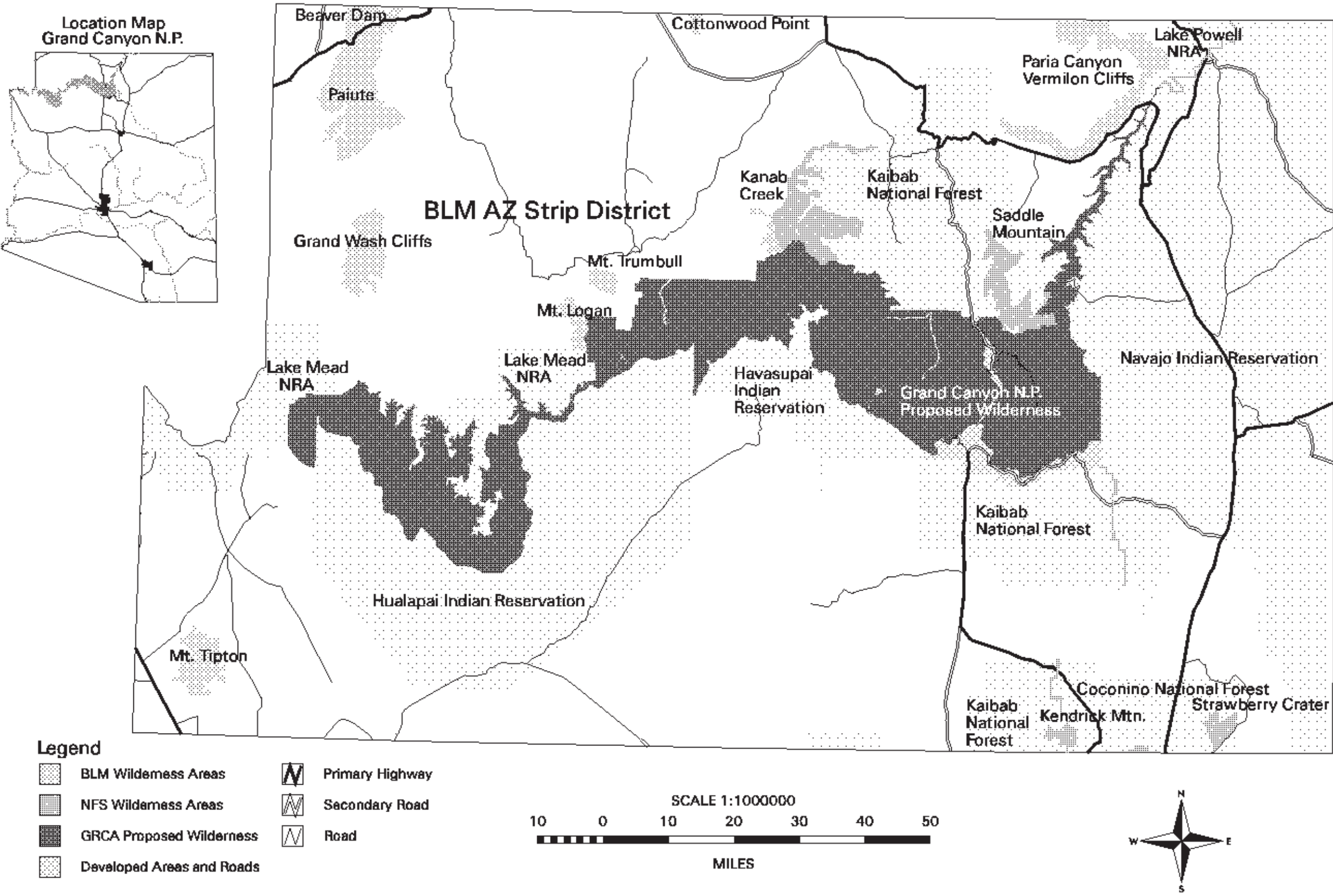
The Wilderness Management Plan will be effective for a minimum of five years, and a period not to exceed ten years. Staff with wilderness responsibilities, including the Wilderness Coordinator, Wilderness District Ranger, and Trail Crew Foreman will conduct an annual review. The annual review process will incorporate data from resource monitoring and research projects, visitor use statistics, and status reports on visitor use management in the Park's wilderness areas. The purpose of the annual review will be to evaluate the status and effectiveness of management actions, and to ensure that the management objectives stated in this Plan are being met. Priorities of implementing actions described in the Plan will also be determined, and incorporated into the annual work plans for the appropriate work unit.

The Wilderness Management Plan update will occur within a five-year period depending on the need for major revision and update as determined through the annual review process or as necessitated by change in Grand Canyon National Park management direction and/or NPS policy. The update will incorporate public meetings and comments, research and monitoring data, visitor use information, NPS policy, and legislated wilderness mandates.



Grand Canyon National Park

Proposed Wilderness and other existing Wilderness Areas



CHAPTER 2

Wilderness Management at Grand Canyon National Park

2.1 Grand Canyon National Park Wilderness Recommendation

The Grand Canyon National Park Enlargement Act of January 3, 1975, as amended June 10, 1975, required the National Park Service to prepare a wilderness recommendation for Grand Canyon National Park. In September 1980, the NPS submitted a wilderness recommendation consisting of 980,088 acres proposed for immediate designation, and 131,814 acres proposed for potential wilderness designation. (U.S. Department of the Interior, National Park Service 1980).

Since that time, acquisition of grazing, mineral, and other leases, and completion of land-use studies, necessitated a revision of the recommendation. The 1993 update of the 1980 recommendation (U.S. Department of the Interior, National Park Service 1993) is based on changes in the land status of proposed potential wilderness, the 1969 Field Solicitor's opinion regarding the western boundary of the Navajo Reservation, and refinements in acreage determined by the Geographical Information System (GIS). All changes are consistent with the letter or intent of the 1980 recommendation (Crumbo 1996).

Two units totaling 1,139,077 acres are proposed for wilderness designation in Grand Canyon National Park. These units include about 94% of the Park's total area. Of this total, 1,109,257 acres are proposed for immediate wilderness designation, and 29,820 are proposed

for designation as potential wilderness, pending resolution of boundary and motorized riverboat issues (See Appendix C, A History of the Wilderness Recommendation at Grand Canyon National Park). Represented within these units are examples of all the Park's physiographic regions. A map of the Grand Canyon National Park wilderness is included as Figure 1.1.

The 1975 Grand Canyon Enlargement Act dealt directly with the question of occupancy and use of the Havasupai Reservation lands of Grand Canyon National Park. The Act declared a reservation of approximately 185,000 acres to be held in trust for the Havasupai Tribe, and specified conditions on the uses of those trust lands. The Act also provided for an additional 95,300 acres as "Havasupai Use Lands" within Grand Canyon National Park where the Secretary may allow tribal uses "...subject to such reasonable regulations as he may prescribe to protect the scenic, natural, and wildlife values thereof." Congressional intent to include these lands within the wilderness recommendation was explicit.

NPS Management Policies (1988) require that proposed wilderness study areas be managed as designated wilderness, and that no actions be taken that would diminish wilderness suitability until the legislative process for wilderness designation has been completed. The General Management Plan (1995) treats all proposed wilderness areas as designated wilderness, and anticipates the final resolution of wilderness issues.

2.2 Natural and Cultural Aspects of the Wilderness Resource

Natural Resources

Grand Canyon National Park contains some of the world's most spectacular topography. The Canyon is about a mile deep, and varies in width from a minimum of 75 feet at river level in the Middle Granite Gorge to about 18 miles at rim level along the Bright Angel Fault between Grand Canyon Village and the North Rim. Sedimentary rock layers have been carved into buttes, temples, and spires by water, wind, and faults. In addition, the Canyon is comprised of igneous and metamorphic rock, volcanoes and lava flows, waterfalls, springs, and caverns.

The plant communities within the Grand Canyon vary from cool, moist subalpine forests and meadows between 8,000 and 9,000 feet to hot, dry deserts at elevations as low as 1,200 feet. About 1,500 plant species occur within the Park, including one listed endangered species, and several other candidate species. Cryptogamic soil crusts are extensive in portions of the Canyon, but are highly vulnerable to the impacts of recreational use.

Grand Canyon National Park is a valuable wildlife refugia due to the immense primitive areas, the topographic character, and the relatively unfragmented habitat. There are 315 bird species, 88 mammal species, 50 reptile and eight amphibian species, 21 fish species (including five native species), and

thousands of different aquatic and terrestrial invertebrates. Seven animals are officially listed as endangered, one as threatened, and a dozen are listed as sensitive or candidate species. The Kaibab squirrel, for example, is a unique subspecies that has coevolved with natural processes, such as fire, on the Kaibab Plateau. The California condor, recently reintroduced immediately outside the Park, will become an uncommon but appreciated inhabitant.

The largest carnivore, the mountain lion, roams much of the Grand Canyon, although little is known about their populations. Mammals common to the inner canyon include mule deer and desert bighorn sheep. Other wildlife, sometimes considered threats to personal comfort or safety, include ground squirrels, ringtail cats, striped skunks, rattlesnakes, and scorpions. Regulations pertaining to proper camping distance from creeks and springs are primarily for the protection of water resources, habitat, and prevention of wildlife disturbance. The proper storage of food, and low-impact meal preparation practices help avoid unwanted encounters with rodents and insects at wilderness campsites.

Water resources originating as springs and seeps in the inner canyon provide important water sources for wildlife and humans. At least 70 major springs and streams are supported by groundwater draining from plateaus outside the Park boundary. The major water source for many backcountry users is

Every great landscape carries in its beauty the seeds of its own destruction. Primitive wilderness characteristics give the national parks their real prestige and will increasingly add to their distinction as these qualities disappear elsewhere. But these qualities are readily destroyed; they are fragile things. How preserve them? The answer may well depend upon how clearly we define our aims.

*Newton B. Drury
Director,
National Park
Service,
1940-1951*

the Colorado River which bisects the Park, flowing a distance of 277 miles between the reservoirs of Lake Powell and Lake Mead. While major tributaries and the Colorado River provide perennial water, seeps and springs in many side canyons may be unreliable sources at different times of the year.

Grand Canyon enjoys some of the nation's cleanest air. Under the Clean Air Act, the Park is a Class I area which affords the highest level of protection from increased pollution. Air quality is influenced by humidity, precipitation, and temperature inversions, as well as long-distance, regional, and local pollution sources. Under the most pristine conditions, visitors may enjoy a visual of range of more than 240 miles.

Natural sounds and natural quiet have long been regarded as Park resources. They are among the conditions and resources the National Park Service is mandated to protect and preserve. Just as natural quiet is important to visitor experience and Park appreciation, it is also critically important to other protected Park resources. "Non-natural sounds" (i.e., introduced, human-caused, or mechanically produced sounds) may, depending on location, volume, and timing, produce direct and indirect negative physiological and behavioral responses in wildlife.

Nonnatural sounds may also negatively impact cultural resources, specifically, ceremonial, sacred, or traditional-use sites. The presence of aerial overflights, motorized rafts, and power tools can threaten wilderness values.

Cultural Resources

Grand Canyon National Park contains a rich assortment of cultural resources spanning 10,000 years of human occupation. Four cultural resource categories are present in the wilderness areas of Grand Canyon National Park: archeological, ethnographic, historic, and objects.

At present, six historic districts, two prehistoric sites and one individual structure are listed on the National Register of Historic Places. One prehistoric site and one historic district are located in the wilderness; the Little Jug site is located on the Uinkaret Plateau, near Tuweep, while the Last Chance Mine Historic District is located at the base of the Grandview Trail on Horseshoe Mesa.

In 1980 the entire Park was determined eligible by the State Historic Preservation Officer as a multiple resource archeological district. Formal listing has yet to be completed. Historic properties listed on the National Register of Historic Places, as well as those that are pending nomination and those that are eligible for nomination, are subject to the same protections under the National Historic Preservation Act and NPS policies. Determinations of eligibility for the National Register have been received for ten trails within the Canyon.

Archeological Resources

Nearly 3,700 prehistoric and historic sites have been documented in Grand

Canyon National Park to date, and it is estimated that approximately 50,000 sites are present. The existing inventory is based on intensive survey of only two percent of the Park. The archaeological resources of Grand Canyon encompass a wide variety of cultural remains indicating human use of the Canyon over the past 10,000 years.

In addition to the prehistoric and historic American Indian archaeological legacy, physical remains of Euro-American endeavors from the time of first contact in 1540 through development of the national park are represented in the archaeological record. The historic archaeological record includes evidence of early exploration by John Wesley Powell and Robert Brewster Stanton, mineral exploitation by Ralph Cameron, Pete Berry, William Wallace Bass, Louis Boucher, and John Hance among others, and the remains of early tourist enterprises.

Historic Resources

Historic resources are cultural resources which have been determined significant in a historic context or theme, on Park lands. Significance has been achieved during the historic, as opposed to the prehistoric, time period. Historic resources include districts, sites, landscapes, structures, archival materials, and objects. Significance is determined primarily through archival research.

The historic period is best summarized by the history of exploration, exploitation, pioneer settlement, railroad development, and Federal administration.

Ethnographic Resources

An ethnographic resource is defined as any natural or cultural resource linked to traditional practices, values, beliefs, history, and/or ethnic identity of a cultural group or groups.

Grand Canyon has been home to various peoples for thousands of years. These people, both American Indians and Euro-Americans, have used the Canyon as both a home and a place linked to traditional practices, values, and beliefs. To the Hopi and Zuni, the Grand Canyon represents their place of origin into this world. For Hopi, it also represents the place where their spirits come to rest after death. For the Pueblo people (Hopi and Zuni), archaeological remains in the Canyon provide evidence for their migration from their place of origin to their present homes. For the Pai people (Hualapai and Havasupai), the Canyon and the River are lands for which they have been entrusted to care. For the Southern Paiute, the Canyon represents a place given to them by the Creator to protect and manage, including its water and natural resources. To the Navajo people, the Colorado River in Grand Canyon forms a protective boundary on the western border of Navajo land, and some Navajo clans trace their ancestry to specific Canyon locations.

Euro-Americans recognized the Canyon's spiritual values in the establishment of Grand Canyon National Park in 1919. World Heritage designation informed the world that the Grand

Canyon had value beyond just the American people. The 1975 Grand Canyon Enlargement Act specified natural quiet and scenic views as important, yet intangible, qualities that must be protected. These, too, are ethnographic resources.

2.3 Description of Wilderness Visitor Use

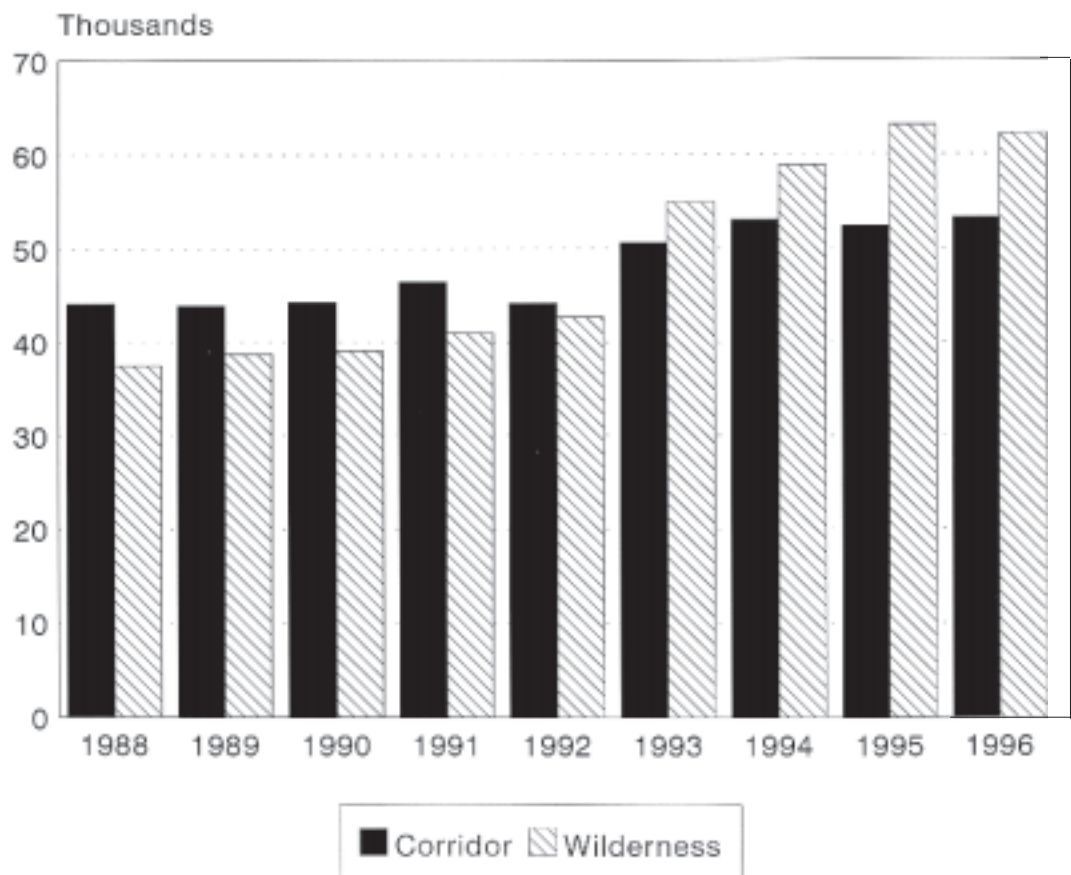
Permits are required for backcountry use. Over 15,000 backcountry permits are issued annually. Although more permits are issued for the Cross-Canyon Corridor, total use is highest in wilderness areas. Overall backcountry

and wilderness use is measured in “user nights,” which is defined as one person per night. Wilderness use statistics indicate a significant increase in use from 1988 to 1996. (See Figure 2.1, Wilderness and Cross-Canyon Corridor Use).

Since 1993, user night totals have exceeded 100,000 annually. Permit operations changed in that year when the Park began issuing permits four months in advance by mail. Prior to this time, backcountry users were required to pick up permits at the Park just prior to their hike. The change in the permit system allowed operations to issue

Figure 2.1

*Wilderness
and Cross-
Canyon
Corridor
Use*



permits more efficiently, but at the same time sacrificed accountability of actual use versus cancellations and changes in trip plans, including the number of people in each party. Statistically, visitor use peaks in the wilderness areas in the months of April and October, which is typically when conditions are most amenable for wilderness travel. (See Figure 2.2, Annual Use Patterns by Month, 1991-1995.)

Sociological research and studies on backcountry users at Grand Canyon reveal that, demographically, the population of users appears to conform with national trends for wilderness use

(Hendee, et al. 1990). Studies showed that the highest proportion of users were between the ages of 23 and 35, lived in cities of 75,000 or more, had an annual income of at least \$50,000, and that over two-thirds had completed at least four years of college (Underhill, et al. 1986; and Jalbert 1992).

Although it is difficult to determine the overall experience level of hikers in the Grand Canyon wilderness Use Areas, it is known that the more experienced hikers tend to use more remote areas. Research conducted by Underhill and others in 1986 evaluated the hiking experience of overnight users; the

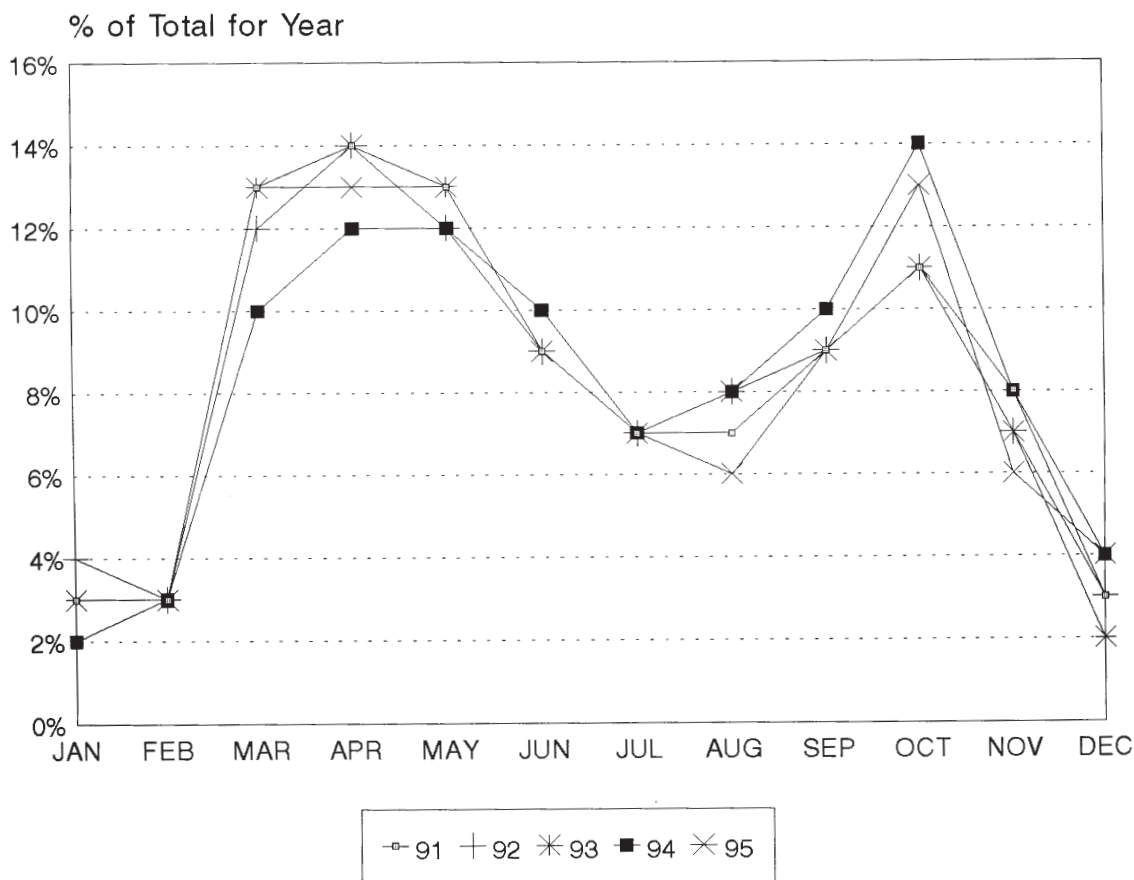


Figure 2.2

Annual Use
Patterns by
Month, 1991-
1995

results showed seasonal differences among users. Summer hikers were the least experienced group at Grand Canyon, winter hikers most experienced, with spring and fall hikers in between.

There is little variation in the seasonal distribution of overnight use in the Threshold Use Areas; whereas, the more remote Primitive and Wild Use Areas have higher use in the spring and fall (Jalbert 1992). For a discussion of Use Areas see Chapter Six, Wilderness Campsite Management.

The maximum allowed group size is 11 people. Park statistics show that the average size of an overnight hiking party is 3.3 persons, and the average trip length is three days (Backcountry Office, 1988-95). The studies showed that groups of two made up the highest proportion of users, followed by groups of three or more, and solo hikers (Underhill, et al. 1986; Jalbert 1992). Of the groups with two or more people, over 50% were friends hiking together, less than 30% were families, and less than 10% were organized groups (Underhill, et al. 1986 and Jalbert 1992).

Wilderness hikers often encounter other user groups including stock users and day hikers on popular Corridor trails, and river users at beaches and attraction sites along the Colorado River. Currently, private and commercial stock use in the inner canyon is limited to 40 miles of trail, primarily within the Cross-Canyon Corridor. Several miles of primitive roads and trails on the rims are also open to stock use. Designated

stock camps are also located near the developed Corridor campgrounds. Frequent encounters with day hikers are most common on the Corridor trails, and are increasing on trails accessible from popular rim overlooks. Encounters with river users along the Colorado River vary seasonally. During the summer months when river use is highest, hikers who camp at popular beaches may encounter groups of up to 36 people travelling on large motorized rafts. A small hiking group could potentially encounter a large river trip at popular attraction sites within large tributaries of the Colorado River.

2.4 Mandates Guiding Park Actions

Congressional legislation, National Park Service policies, and Park policies provide guidelines for administering each national park. The guidelines tend to become more specific as one moves from Congressional acts to local policies. While the mandates authorize the establishment and delegate management of Federal lands, the purpose and significance, goals, and management objectives are further defined in national and local park policies.

National Park Service Legislation

The National Park Service Organic Act of 1916 (39 Stat. 535, 16 USC 1) established the NPS and provided the agency with its fundamental direction by defining its purpose, which is to:

...promote and regulate the use of the Federal areas known as National Parks...by such means and measures as conform to the fundamental purpose of the said Parks... which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

These areas derive increased national dignity and recognition of their environmental quality.... The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public values and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established.

The Redwood Act Amendments in 1978 (16 U.S.C. §1a-1) further expanded the Organic Act to state:

The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have

been or shall be directly and specifically provided by Congress.

Congress intended park visitation to be contingent upon the ability of the NPS to preserve park environments in an unimpaired condition. What constitutes an “impaired” resource is ultimately a management determination. It is in this context that the vision, goals, and objectives for wilderness management at Grand Canyon were developed and are being implemented.

Grand Canyon National Park Legislation

On January 11, 1908, President Theodore Roosevelt, under the authority of the Antiquities Act of 1906, reserved land as the Grand Canyon National Monument. In Proclamation No. 794 (35 Stat. 2175), Roosevelt stated that the Grand Canyon is:

...an object of unusual scientific interest, being the greatest eroded canyon within the United States, and it appears that the public interests would be promoted by reserving it as a National Monument with such other land as is necessary for its proper protection.

The Grand Canyon National Park Establishment Act of 1919 (40 Stat 1175) dedicated and set apart Grand Canyon National Park as a “public park for the benefit and enjoyment of the people.” In the Grand Canyon National Park Enlargement Act of

1975 (16 U.S.C. §228a et seq.) Congress stated that its object was to:

...provide for the recognition by Congress that the entire Grand Canyon, from the mouth of the Paria River to the Grand Wash Cliffs, including the tributary side canyons and surrounding plateaus, is a natural feature of national and international significance. Congress therefore recognizes the need for the further protection and interpretation of the Grand Canyon in accordance with its true significance.

On June 10, 1975, The Grand Canyon National Park Enlargement Act was amended (P.L. 94-31), and provided the Secretary of the Interior two years to make a recommendation as to the suitability or unsuitability of any portion of the Park as wilderness.

World Heritage Site Designation

In October 1979, Grand Canyon National Park was designated as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO). As a World Heritage Site, the Grand Canyon was given the greatest protection for a natural area. The protection of the area's outstanding geological, biological and cultural features and processes is assured for all people for all time. The Grand Canyon is unique in meeting both natural and cultural resource criteria for World Heritage Site designation.

The Wilderness Act of 1964

The Wilderness Act of 1964 (P.L. 88-577) guides the form of most administrative decisions affecting the Park's wilderness. The purpose of Wilderness, as stated in the Act, is:

To establish a National Wilderness Preservation System for the permanent good of the whole people...to secure for the American people of current and future generations the benefits of an enduring resource of wilderness (Section 1 (a)).

The National Wilderness Preservation System, therefore, is for people and its components are to be administered in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness (Section 2(c)).

The Act implicitly distinguishes between an area's public purposes and the administrative actions necessary to realize those purposes. The Wilderness Act does not contradict a superintendent's discretionary authority to administer a park. As the Act states:

...except as necessary to meet minimum requirements for the administration of the area for the

purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motor boats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area (Section 4(c)).

The Act makes clear that mechanized or motorized equipment is inappropriate for public purposes like recreation, education, or scientific study that is not serving administrative purposes. Such equipment, however, is occasionally appropriate for administration of a wilderness area, provided that the result meets the Act's requirements for such an effort. More specifically, efforts necessitating the equipment must protect or rehabilitate the area's character and contents as wilderness for enjoyment or study by future generations.

The Americans With Disabilities Act (ADA)

The Americans With Disabilities Act addresses the issue of accessibility in the National Wilderness Preservation System:

...Congress reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of wheelchairs by an individual whose disability requires use of a wheelchair, and consistent with the Wilderness Act, no agency is required to provide any form of

special treatment or accommodation, or to contract any facilities or modify any conditions of lands within a wilderness area to facilitate such use.

Additionally, the ADA defines the term wheelchair as "a device designed solely for use by a mobility-impaired person for locomotion, that is suitable for use in an indoor pedestrian area." (See Appendix F, Wilderness Use By Persons with Disabilities; U.S. Department of Agriculture. National Forest Service 1996).

The National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969 (P.L. 91-190; 31 Stat. 852) declared a Federal policy to "preserve important historic, cultural, and natural aspects of our national heritage." It required Federal agencies to "utilize systematic, interdisciplinary approaches which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment."

With the passage of NEPA, Federal agencies were required to use a specific environmental planning process where any Federal action being considered would, if implemented, have an impact on the human environment. These actions may include, but are not limited to, adoption of policy, plans, programs, and approving projects and permits. NEPA sets

environmental policy goals; imposes analysis of potential environmental, social, and economic impacts; and requires a public review process.

The National Historic Preservation Act (NHPA)

The National Historic Preservation Act of 1966 (P.L. 89-665, 80 Stat. 915), as amended in 1992 (P.L. 102-575), declared a national policy of historic preservation, including encouragement of preservation on the State and private levels. It authorized the Secretary of the Interior to expand and maintain the National Register of Historic Places. It established the Advisory Council on Historic Preservation and designated State Historic Preservation Officers. It required Federal agencies to consider the effects of their undertakings on properties listed or eligible for listing on the National Register.

By incorporating Executive Order 11593, it instructed all Federal agencies to support the preservation of cultural properties and directed them to identify and nominate to the National Register properties under their jurisdiction which may be eligible. The 1992 amendments redefined "Federal undertaking" and emphasized the interests of American Indians, Native Hawaiians, and Native Alaskans. It also introduced the concept of Traditional Cultural Properties as National Register eligible properties, and included additional provisions for location confidentiality.

2.5 National Park Service Policies

Authority for implementing Congressional laws is delegated to agencies which identify and interpret all relevant laws, and formulate management policies to guide their implementation. For the NPS, these policies are set forth in a document titled *NPS Management Policies*, revised in 1988.

These policies provide direction for management decisions; adherence is "mandatory unless waived or modified by an appropriate authority." Recommended procedures for implementing servicewide policy are described in the NPS guideline series, and are also mandatory where the language so indicates.

Wilderness Management

National Park Service wilderness management policies are based on provisions of the Organic Act and the Wilderness Act, as well as the establishing legislation of individual parks within the national system. *NPS Management Policies* (6:8) treats all categories of wilderness in the same manner:

...the term wilderness includes the categories of designated wilderness, potential wilderness, and recommended/study wilderness, and these policies apply regardless of category...

The Park Service will take no action that would diminish the wilderness suitability of an area recommended for wilderness study or for wilderness designation until the legislative process has been completed. Until that process has been completed, management decisions pertaining to recommended wilderness and wilderness study areas will be made in expectation of eventual wilderness designation.

NPS Management Policies also addresses the management of public use of wilderness, and states that the NPS will “encourage and facilitate those uses of wilderness that require the wilderness environment and do not degrade wilderness resources and character.” As stated in the Wilderness Act, these areas are for public purposes of recreational, scenic, scientific, educational, conservation, and historical uses.

Regarding public use, *NPS Management Policies* (6:8) states:

Park visitors must accept wilderness largely on its own terms, without modern facilities provided for their comfort or convenience. Users must also accept certain risks, including possible dangers arising from wildlife, weather conditions, physical features, and other natural phenomena, that are inherent in the various elements and conditions that comprise a wilderness experience and primitive methods of travel. The National Park Service will not elimi-

nate or unreasonably control risks that are normally associated with wilderness, but it will strive to provide users with general information concerning possible risks, recommended precautions, minimum-impact use ethics, and applicable restrictions and regulations.

Minimum Requirement Policy

In protecting wilderness character and resources, and in managing wilderness use in accordance with the Wilderness Act, Grand Canyon National Park will adhere to the “minimum requirement concept” within all proposed wilderness, including the river corridor. All decisions pertaining to administrative practices and use of equipment in wilderness will be based on this concept. The guiding principle of the minimum requirement concept is: “that only the minimum regimentation necessary to achieve established wilderness management objectives is justified...apply only the minimum tools, equipment, device, force, regulation, or practice that will bring the desired result” (Hendee, et al. 1990).

NPS Management Policies (6:4) requires the selection of “*the minimum tool or administrative practice* necessary to successfully and safely accomplish the management objective with the least adverse impact on wilderness character and resources [emphasis added].” By indicating that managers are to examine all administrative practices and equipment use, the NPS applies the minimum require-

ment analysis to the full breadth of the wilderness management tasks in protecting wilderness resources. This includes “outstanding opportunities for solitude or a primitive and unconfined type of recreation.” This principle provides an encompassing framework for management decisions at several levels (See Appendix D, Minimum Requirement Decision Process).

2.6 Grand Canyon National Park Policies

General Management Plan (GMP)

The Grand Canyon National Park General Management Plan (U.S. Department of the Interior. National Park Service 1995) provides the overall direction for the protection of resources and visitor experiences. The GMP states that the Park’s purpose is based on the enabling legislation, and that as a place of national and global importance, Grand Canyon National Park is to be managed to:

- 1) preserve and protect its natural and cultural resources and ecological processes, as well as its scenic, aesthetic, and scientific values*
- 2) provide opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of the Grand Canyon without impairing the resources.*

The GMP specifies management objectives which are based on the Park’s purpose and significance, and which set the direction for management. Several management objectives define the desired conditions for management of wilderness values, including the preservation of visitor experience and protection of natural and cultural resources.

The GMP also directs the preparation of separate action plans to implement overall Park management. This includes the development of this document, i.e., a plan for managing visitor use and protecting resources in the Park’s backcountry and wilderness areas. The GMP specifies that, in accordance with *NPS Management Policies*, the proposed wilderness must be managed as designated wilderness, and “anticipates the final resolution of wilderness issues, and the preparation of a wilderness management plan as future actions.”

Resource Management Plan (RMP)

The Park’s 1997 Resource Management Plan (U.S. Department of the Interior. National Park Service 1997a) provides a comprehensive overview of the Park’s natural and cultural resources, and identifies actions that will enable the NPS to fulfill its legislative mandate to protect Grand Canyon in keeping with its true significance.

The RMP defines specific, nonroutine actions for resource protection, and provides justification for allocating

funds to various resource management projects. The RMP contains a priority listing of projects determined by managers to address primary issues. Pertinent to the scope of the Wilderness Management Plan, several project statements address wilderness resources and values. Included in the projects statements are:

- 1) updating visitor use management action plans (such as the Wilderness and Colorado River Management Plans)
- 2) monitoring visitor use and impacts to social and biophysical resources, and
- 3) mitigating wilderness resource impacts.

Fire Management Plan

The goal of the Park's Fire Management Program as defined in the 1992 Fire Management Plan is to effectively manage wildland fire and provide for the protection of life, property, and cultural resources, while ensuring the perpetuation of ecosystems and natural resources. The Fire Management Plan also specifically addresses the restoration of the natural fire regime in wilderness areas, using practices consistent with management policies and other planning documents, including the Resource Management Plan and Wilderness Management Plan.

The current Fire Management Plan addresses the proper minimum-impact suppression techniques, but lacks clear direction for implementing a Minimum Requirement Process. The updated plan will be consistent with the Wilderness

Management Plan and management policies regarding administrative use of roads, road closures, landing facilities, and use of aircraft in wilderness.

Colorado River Management Plan

Wilderness management issues and strategies that overlap with river management pertain primarily to the linkage of the two user groups (overnight hikers and river runners), and the application of minimum requirement policies. While Park policy on group size differs for either user group, the Wilderness and Colorado River Management Plans each describe standards for the types of experience on a spatial and temporal basis. The Wilderness Plan emphasizes the difference in experience opportunities through the zoning or spatial concept, while the Colorado River Plan defines opportunities on a seasonal or temporal basis. Each plan will integrate the overarching issues pertaining to each user group.

Park policy on administrative use of wilderness, or "minimum requirement," will be consistent in the Wilderness and Colorado River Management Plans. This policy includes use of the appropriate conveyance, tools, and visitor contact techniques to meet the objectives of resource protection and visitor experience management in wilderness.

Cross-Canyon Corridor Management Plan

Management of the Cross-Canyon Corridor will continue under the 1988 Backcountry Management Plan until a specific visitor use management plan for the Cross-Canyon Corridor is developed. Management standards for campsite condition and visitor experience will be consistent with the goals and objectives of the 1995 General Management Plan. Regulations regarding backcountry permitting operations and overnight camping are consistent with the Wilderness Management Plan.

Cave and Karst Management Plan

Of an estimated 1,000 caves in the Park's wilderness, 335 have been recorded. The 1997 Cave and Karst Management Plan provides for a systematic inventory, assessment, and classification of Park cave resources. Recreational and scientific use of caves is also directed by the plan, which addresses management responsibilities for resources management, safety, education, and restoration of impacted cave resources.

Other Plans

The following undeveloped but anticipated plans may affect wilderness qualities and management of resources in wilderness areas:

- Aircraft Management Plan
- Water Resource Management Plan
- Vegetation Management Plan

- Habitat Restoration Plan
- Wildlife Management Plan.

As stated in the GMP, as implementation plans are developed and updated, they will be consistent with NPS wilderness policy requirements.

Other Authorities

One method to limit or eliminate potential resource damage is through selective temporary or permanent closures to all or certain types of public use. The general authority for such closures is 36 CFR §1.5(a), which states

Consistent with applicable legislation and Federal administrative policies, and based on a determination that such action is necessary for the maintenance of public health, safety, protection of environmental or scenic values, protection of natural or cultural resources, aid to scientific research, implementation of management responsibilities, equitable allocation and use of facilities, or the avoidance of conflict among visitor use activities, the superintendent may:

(1) Establish, for all or a portion of a park area, a reasonable schedule of visiting hours, impose public use limits, or close all or a portion of a park area to all public use or to a specific use or activity.

(2) Designate areas for a specific use or activity, or impose conditions or restrictions on a use or activity.

Decisions made under the authority of this section will be based on written determinations justifying the actions, and signed by the superintendent.

2.7 Grand Canyon Wilderness Management staff

Grand Canyon staff responsible for wilderness management include wilderness rangers; backcountry office visitor-use assistants; a variable trail-crew staff; and a wilderness coordinator.

Wilderness Rangers

Wilderness rangers are assigned geographic areas of responsibility about which they are expected to be highly knowledgeable. They conduct extended trips into wilderness on foot, monitoring resources, contacting hikers, providing information and education, and working on resource projects. Wilderness rangers are also responsible for visitor protection and emergency operations. Wilderness rangers spend approximately 80 to 85% of their time to wilderness protection. Backcountry office staff spend approximately 50% of their time on wilderness management through permit processing, education, and information exchange.

Wilderness Trail Crew

Trail-crew numbers vary with the availability of supplemental funding. Currently, (1998) there are no full-time wilderness trail staff, although part-time or seasonal crews assigned to wilderness have numbered up to ten workers. On the average, approximately 200 person-days are devoted to river and backcountry trail restoration. Major restoration efforts on the Hermit and Grandview Trails were conducted in the 1997 season, involving crews of eight over a period of approximately three months. At present, there are no base-funded, full-time trail staff devoted to wilderness trails. Additional work will depend on available supplemental funding.

Wilderness Coordinator

Grand Canyon funds a full-time wilderness coordinator in the Science Center. Duties include providing guidance in implementing NPS wilderness preservation and management policies; developing and writing wilderness-related plans; assisting in the development of restoration projects; NEPA compliance; and coordinating wilderness training.

Wilderness Steering Committee

In 1994, the Director of the National Park Service, in response to the recommendations of the 1993 Wilderness Task Force, outlined the responsibilities of park superintendents regarding wilderness management

(U.S. Department of the Interior. National Park Service 1994b). One of the Task Force's recommendations included the establishment of a national and park-level "Wilderness Steering Committee" (U.S. Department of the Interior. National Park Service 1994d:2). The purpose of the committee is to "provide strong wilderness leadership... [and] facilitate and promote interagency cooperation...." The report emphasized the need for wilderness training, research and ecosystem management (U.S. Department of the Interior. National Park Service 1994d:2). The Park's immediate response was to develop a Wilderness Resource Management Team (U.S. Department of the Interior. National Park Service 1994c). Composition of this group was modified in 1995 to comprise the Park's current Wilderness Steering Committee (U.S. Department of the Interior. National Park Service 1995c).

The role and function of the Grand Canyon National Park Wilderness Steering Committee (WSC) is twofold:

- To provide leadership for the field implementation of NPS wilderness policy at the Park; and
- To make recommendations to management regarding minimum-requirement operational decisions. The WSC is made up of senior-level managers who share responsibility for field implementation of the Wilderness Management Program.

2.8 Summary of Changes and Actions

- Implement wilderness management policies for areas of proposed wilderness in Grand Canyon National Park in accordance with *NPS Management Policies*, the Grand Canyon General Management Plan, and the Wilderness Act
- Implement minimum requirement strategy for public and administrative use in Grand Canyon National Park
- Prepare other Park management plans consistent with the Wilderness Management Plan as directed in the General Management Plan and consistent with *NPS Management Policies*, including the
 - Fire Management Plan
 - Colorado River Management Plan
 - Cave and Karst Management Plan
- Establish and maintain Park staffing levels to ensure wilderness management responsibilities are met as directed by NPS Wilderness Management Guidelines:
 - Wilderness Steering Committee
 - Wilderness Coordinator
 - Wilderness Rangers
 - Wilderness Trail Crew

Chapter 3

WILDERNESS MANAGEMENT PLANNING FRAMEWORK

3.1 Background of Backcountry and Wilderness Planning at Grand Canyon National Park

A wilderness study process preceded the development of the first Backcountry Management Plan. In 1970, the Park released its Preliminary Wilderness Study for Grand Canyon National Park, Marble Canyon National Monument, and Grand Canyon National Monument (U.S. Department of the Interior. National Park Service 1970). The total recommendation was 569,000 acres or approximately 63% of the 900,000-acre Park. Then in 1971, the Park issued a Wilderness Recommendation (U.S. Department of the Interior. National Park Service 1971) of 508,000 acres, not including the river corridor or North Rim. By 1973, the Park released its Final Environmental Statement for the Proposed Wilderness Classification (U.S. Department of the Interior. National Park Service 1973) which consisted of 512,870 acres and included North Rim.

The first visitor-use management plan for the backcountry areas of Grand Canyon was approved in 1974. This document, the Backcountry Use and Operations Plan (U.S. Department of the Interior. National Park Service 1974), established use limits for trail-heads outside the corridor (use limits for the corridor had been established in 1971), and set a maximum group size of 16 individuals. Permits were issued at the South Rim Visitor Center.

In 1975, the Grand Canyon National Park Enlargement Act incorporated Marble Canyon National Monument, Grand Canyon National Monument, portions of Lake Mead National Recreation Area, Kaibab National Forest and some Bureau of Land Management lands into Grand Canyon National Park. The Act, as amended in August 1975 (P.L. 94-31), required the submission of a wilderness recommendation reflecting an enlarged Grand Canyon National Park within two years.

During 1975, a Backcountry Reservations Office (BRO) was established. Backcountry reservations were made up to one year in advance. A lottery was conducted for persons requesting permits during the busy Easter holiday period. In 1976, a new management system was implemented based on heavy use in Hermit Creek. Campgrounds and nightly capacities were established for the area west of the Bright Angel Trail to Hermit Creek.

In 1977, the Final Wilderness Recommendation (U.S. Department of the Interior. National Park Service 1977) recommended 1,004,066 acres for immediate designation, and an additional 108,945 acres as potential wilderness. The action was suspended until completion of the Colorado River Management Plan. Then in 1980, the Wilderness Recommendation was revised to eliminate the Cross-Canyon Corridor from wilderness consideration. During this same period, the reservation system was changed from accepting reservations one year in advance to three months in advance. The change was

intended to spread the BRO workload over the year, and reduce the number of no-shows, which were estimated at 50% in 1977 and 35% in 1980.

A new Backcountry Use Plan was drafted in 1981, and by 1983, the new Backcountry Management Plan was adopted (U.S. Department of the Interior. National Park Service 1983a). Major changes included establishment of four Management Zones and 72 Use Areas with prescribed use limits, replacing a trailhead quota system. Another major action was the initiation of sociological and ecological research and monitoring programs. A North Rim Backcountry Reservation Office was established in 1983.

Between 1983 and 1986 extensive sociological research was conducted, resulting in recommendations on use distribution and backcountry operations. Ecological research focused on campsite condition and distribution. A public review process was initiated in 1987, and by September 1988, a revised Backcountry Management Plan was approved incorporating information from these studies (U.S. Department of the Interior. National Park Service 1988a). Major changes included opening more corridor and rim trails to private stock use, inclusion of a commercial use policy, reallocation and distribution of use based on the research, and adaptation of management objectives for specific management strategies.

In the four-year period between 1988 and 1992, overnight use increased by 12%. In 1993, a new permitting system

was implemented whereby mail-in permits were accepted four months in advance, and a pre-trip check-in was no longer required. Statistics showed a 32% increase in overnight use from 1992 to 1995.

In 1993, the Wilderness Recommendation was updated to include 1,139,007 acres proposed for designation. Of this total, 1,109,257 acres were recommended for immediate designation, and 29,820 acres were recommended for designation as potential wilderness pending resolution of boundary and motorized river use.

Public Scoping began for a new Backcountry Management Plan in June 1995. The General Management Plan was also approved, replacing a 1976 Master Plan. The General Management Plan provided guidance for wilderness management, and called for the development of a Wilderness Management Plan. As a result, efforts to update the Backcountry Management Plan were redirected to complete a Wilderness Management Plan for the 1.1 million acres of proposed wilderness in Grand Canyon National Park.

3.2 NPS Planning Guidance

Planning guidance for resource management and visitor use plans is provided at the national and park levels. *NPS Management Policies* (6:4) specifically requires and guides the development of planning documents which address backcountry and wilderness management:

*In God's
wilderness lies
the hope of
the world--the
great fresh
unblighted,
unredeemed
wilderness.
The galling
harness of
civilization
drops off, and
the wounds
heal ere we
are aware.*

*John Muir
July 1890
From
John of the
Mountains*

The superintendent of each park containing wilderness will develop and maintain a wilderness management plan to guide the preservation, management, and use of that wilderness. This plan may be developed as a separate document or as a action component of another appropriate management plan, such as the general management plan or backcountry management plan...The plan will be developed with public involvement and will contain specific, measurable management objectives that address the preservation of wilderness-dependent cultural and natural resources and values in order to achieve the public purposes specified by the Wilderness Act and other appropriate legislation.

Backcountry use will be managed to avoid unacceptable impacts on park resources or adverse effects on visitor enjoyment of appropriate recreational experiences. The National Park Service will identify acceptable limits of impacts, monitor backcountry use levels and resource conditions, and take prompt corrective action when unacceptable impacts occur. Management strategies designed to guide the preservation, management, and use of the backcountry and to achieve the park's management objectives will be integrated into the park's backcountry management plan. (NPS Management Policies, 8:3)

NPS-77, *Natural Resources Management Guidelines* (U.S. Department of the Interior. National Park Service 1991), provides comprehensive guidelines on natural resource management which assure that activities planned and initiated at the park level comply with Federal laws and regulations and NPS and Departmental policies. Specific guidance is provided for Backcountry Recreational Use Planning and Special Park Designations Uses, which include wilderness areas.

The 1993 Wilderness Task Force evaluated wilderness management in the National Park Service. The report, *Wilderness Task Force Report on Improving Wilderness Management in the National Park Service* (U.S. Department of the Interior. National Park Service 1994), identified several areas where management practices were not consistent with Federal laws and national policies. The report identified the weakness or lack of NPS guidance for wilderness planning. Actions recommended for improving wilderness planning included the development of wilderness planning and management guidelines, and the development of a wilderness resource team concept to facilitate the wilderness planning process. The National Wilderness Steering Committee was formed in response to the report, and has drafted guidelines which include wilderness planning requirements (U.S. Department of the Interior, National Park Service 1997b).

In February 1995, a special directive regarding wilderness management in National Parks was issued from the Director's Office. Special Directive 95-2, *Management and Planning Policy for Suitable, Proposed, Recommended, and Potential Wilderness Areas* (U.S. Department of the Interior. National Park Service 1995a), states that in addition to managing classified areas for the preservation of their wilderness values, "planning for these areas must be oriented toward ensuring the preservation of their wilderness character until such time as Congress determines their eventual designation." It further states that wilderness policy must be reflected in general management planning and in all types of activity plans for wilderness areas.

Grand Canyon National Park's General Management Plan directs the preparation of visitor-use management plans for all areas of the Park. The GMP specifies that, in accordance with *NPS Management Policies*, the proposed wilderness be managed the same as designated wilderness, and "anticipates the final resolution of wilderness issues, and the preparation of a wilderness management plans as future actions." As a specific project statement, the 1997 Resource Management Plan (U.S. Department of the Interior. National Park Service 1997a) directs that the 1988 Backcountry Management Plan be revised to be consistent with NPS wilderness policy requirements.

3.3 The Limits of Acceptable Change

The Wilderness Management Plan uses the concepts outlined in *The Limits of Acceptable Change (LAC) System for Wilderness Planning* (Stankey, et al. 1985). The LAC emphasizes a framework for establishing acceptable, appropriate, and measurable resource and social conditions in wilderness. The LAC process focuses on desired conditions, defines what is, and is not, acceptable, and develops a strategy to prevent unacceptable conditions.

The premises of the Limits of Acceptable Change process are:

- some change in conditions is inevitable
- the focus is on human-induced change
- the effects of human activities are important
- a diversity of settings is important to maintain
- determining what is acceptable is value-based.

Planning models such as LAC are designed to facilitate the balancing of visitor use with the protection of park resources and impacts to other visitor and park uses. The LAC model was adopted for the 1988 Backcountry Management Plan, and the 1989 Colorado River Management Plan, and provided clear guidance for monitoring and implementing management actions to reduce impacts to resources from recreational use.

NPS Management Policies and the *Natural Resources Management Guidelines* (NPS-77), recognize the Limits of Acceptable Change model as a planning framework for recreation management planning. *NPS Management Policies* states that such plans “will establish indicators, standards, conditions, and thresholds above which management actions will be taken to reduce impacts” (6:5). Standards are developed using the best available knowledge of Grand Canyon wilderness management, including ecological limitations, visitor use patterns, and existing environmental conditions, as well as current literature on wilderness management and national trends. Indicators are those measurable variables which determine resource condition, and measure the standard.

The emphasis of the LAC framework is to outline management objectives through the use of indicators and standards for various resource and social conditions and values. These methods are applied to help managers structure management direction. This information is included in a description of indicators, standards and monitoring programs in Chapter 12.

3.4 Management Zoning

In accord with legislative intent and specific objectives to manage for a “diverse range of visitor experiences compatible with the protection of resources and values” (GMP 1995), “zoning” of Park areas provides a framework for management based on different Park settings. *NPS Manage-*

ment Policies (2:7) requires general management plans to define Management Zones “where strategies for management and use will best fulfill management objectives and achieve the purpose of the park.”

The wilderness areas of Grand Canyon National Park are within the Natural Zone, “managed to conserve natural resources and ecological processes and to provide for their use and enjoyment by the public in ways that do not adversely affect these resources and processes” (*NPS Management Policies*, 2:7). To further represent the diversity of wilderness settings and opportunities, the Park has defined four recreational Opportunity Classes.

Recreational Opportunity Classes

The term “Opportunity Class” replaces “Management Zone” described in the 1983 and 1988 Backcountry Management Plans. The concept has not changed, simply the terminology. As in the GMP, “zone” implies a physical management area, whereas the term “opportunity class” describes a range of conditions or settings for which the Park manages.

Grand Canyon backcountry and wilderness areas are comprised of five Opportunity Classes: Corridor, Threshold, Semi-Primitive Mechanized, Primitive, and Wild. This Plan establishes the Semi-Primitive Mechanized Opportunity Class which identifies access to nonwilderness corridors within the Grand Canyon Wilderness. Each Opportunity

Class is described in terms of the desired resource, social, and managerial conditions for that particular use area (See Figure 3.1).

The Opportunity Classes are based upon the following criteria:

- type and amount of use
- opportunity for solitude
- current resource conditions
- management uses.

The following narrative descriptions outline the general characteristics associated with each Opportunity Class. A listing of standards and criteria is detailed in Figure 3.2.

Corridor

The Cross-Canyon Corridor is a developed inner-canyon area with campgrounds and facilities. The Corridor is not included in the proposed wilderness. The Bright Angel, South Kaibab, and North Kaibab Trails provide access to developed areas, and act as thresholds to the wilderness use areas. The Corridor, which is not specifically covered by this Plan, is referenced to the extent that it represents the spectrum of opportunities and provides a comparison for management strategies in the wilderness areas.

Threshold

This Opportunity Class applies to 24% of the wilderness use areas. Threshold Use Areas are managed for moderate to high levels of use relative to wilderness. Camping can be in designated

sites or at-large, depending on the use area. Composting toilets exist at most areas, or may be installed if required to deal with unacceptable concentrations of human waste. The smallest Threshold Use Area limit for total number of overnight campers is six; the largest is 40.

Semi-Primitive Mechanized

This Opportunity Class applies to the 58 miles of primitive roads in 300-foot wide nonwilderness corridors which access wilderness trailheads and overlooks. These nonwilderness corridors were identified in the public review process (leading to the 1980 Wilderness Recommendation). Use Areas in this Opportunity Class overlap with adjacent Threshold and Primitive Opportunity Classes, and include designated and at-large camping. Mechanized (motorized and bicycle) access is permitted on primitive roads only.

Primitive

This Opportunity Class applies to 50% of the use areas. Primitive areas provide a more isolated and remote experience, and are managed for low to moderate use. Camping is at-large except in very rare cases where campsites may be temporarily designated for resource protection. Toilets are not common and are installed only as a last resort to correct human waste problems. Other structures are generally not permitted except temporary structures that are not visible and do not leave permanent impacts. The

maximum number of overnight users permitted per use area is 29.

Wild

This Opportunity Class applies to 26% of the use areas. Wild areas are mostly remote and provide the greatest opportunities for solitude. No structures of any kind, including toilets, are permitted. The maximum number of overnight users permitted per Wild Use Area is 12.

3.5 summary of changes and Actions

- Adopt recreation management concept of Opportunity Classes, replacing former “management zone” concept first adopted in 1983
- Establish Semi-Primitive Mechanized Opportunity Class to describe conditions and standards for nonwilderness primitive road corridors, in addition to the existing Corridor, Threshold, Primitive and Wild Opportunity Classes

Insert Figure 3.1: Wilderness and Backcountry Opportunity Classes

Insert Figure 3.2: Summary of Management Standards by Opportunity Class

Insert Figure 3.2: Summary of Management Standards by Opportunity Class